

Work Order ID 150970

Monday, September 12, 2016 8:55:00 AM

150970

Page 1

Item ID: D2432 Accept ***N900040100*** Setup Start ***NS1***
Revision ID: Stop ***NS2***
Item Name: Bearpaw 19" X 24"
Start Date: 8/26/2016 Start Qty: 14.00 ***14*** Cust Item ID:
Required Date: 9/12/2016 Req'd Qty: 14.00 ***14*** Customer:
Reference:

Approvals: Process Plan: **DAS 21** Date: **SEP 12 2016** Tooling: Date: Run Start ***NR1***
QC: **9-89** Date: SPC (Y/N): Date: Stop ***NR2***

Sequence ID/ Work Center ID	Operation Description	Set Up/ Run Hours	Tool ID	Tool #	Plan Code	Accept Qty	Reject Qty	Reject Number	Insp. Stamp
Draw Nbr	Revision Nbr								
D2432	H								

120 0.00
120 FLOW WATER JET
Waterjet Memo 0.35
FLOW CNC Waterjet Cut Blank as per D2432 File
14 ϕ **DAS 44 9-89** 16-09-16

130 0.09
130 HAAS CNC VERTICAL MACHINING #1
HAAS 1 Memo 1.05
HAAS CNC vertical machine #1 1-Inspect material for defects or damage prior to machining
2-Machine as per Folio and Dwg D2432 Identify as D2432F
3-Debur
14 ϕ **DAS 44 9-89** 16-09-21

140 0.00
140 QC2- Inspect parts off machine FAI/FAIB
QC Memo 0.02
Quality Control
14 ϕ **DAS 44 9-89** 16-09-21

DQA: _____ Date: _____

WORK ORDER NON-CONFORMANCE / UPDATE

QA Closed: _____ Date: _____

Work Order update only ☐

Work Order: _____ Part No. _____ NCR No. _____		DISPOSITION Rework ☐ Scrap ☐ Use-as-is ☐ Suspected Unapproved ☐		AGAINST DEPARTMENT/PROCESS Skid-tube ☐ Machining ☐ Thermoforming ☐ Large Fab ☐ Cross tube ☐ Small Fab ☐ Finishing ☐ Composite ☐ Water Jet ☐ Prod. Eng. Coord. ☐ Rec/Store/Packaging ☐ Supplier ☐ Engineering ☐ Quality ☐ Other ☐					
Date :		Step #:		QTY Effective :				MRB (QSI042) Approval Completed By Lead hand / Supervisor Approval Verification QC / QA Coordinator Approval	
Description Work Order Deviation				Disposition					

Root Cause				FAULT CATEGORY			
Environment ☐	Design ☐	Doc/Data ☐	Equip/Tooling ☐	Pressure/Forced ☐	Temperature/Cure ☐	Power Loss/Surge ☐	Positioned Wrong ☐
Handling/Pre ☐	Material ☐	Internal Transport ☐	Tribal Knowledge ☐	Bending ☐	Set-up ☐	Folio/Program ☐	Outside Dimensions ☐
LOA ☐	Substation ☐	Past Expiry Date ☐	Misidentified ☐	Centre Not Concentric ☐	BOM/Route ☐	Grain ☐	Over/Under tolerance ☐
				Cracks ☐	Broken/Damage/Defect ☐	Weld ☐	Part Incorrect ☐
				Crimp/Kink/Ripple/Wave ☐	Inspection Incomplete/Unqualified ☐	Wrong Stock Pulled ☐	Part Lost/Missing ☐
				Cuffs ☐	Contamination ☐	Out of Sequence ☐	Part Moved ☐
				Crushing ☐	Countersink ☐	Off-set ☐	Drawing ☐
				Heat Treat ☐	Cut Too Short ☐	Mislabeled ☐	Finish ☐
				Wave/Twist in Tube ☐	Instructions Incomplete/Unclear ☐	Fit/Function ☐	Misread ☐
				Marks/Chatter ☐	Drill Holes ☐	Misaligned/off center ☐	Turning Sequence ☐
				OTHER : _____			

Work Order ID 150970

Monday, September 12, 2016 8:55:00 AM

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Page 2

Item ID: D2432

Accept

N900040100

Setup Start

NS1

Revision ID:

Stop

NS2

Item Name: Bearpaw 19" X 24"

Start Date: 8/26/2016 Start Qty: 14.00

14

Cust Item ID:

Required Date: 9/12/2016 Req'd Qty: 14.00

14

Customer:

Reference:

Approvals:

Process Plan: _____

Date: _____

Tooling: _____

Date: _____

Run Start

NR1

QC: _____

Date: _____

SPC (Y/N): _____

Date: _____

Stop

NR2Sequence ID/
Work Center IDOperation
DescriptionSet Up/
Run Hours

Tool ID

Tool #

Plan
CodeAccept
QtyReject
QtyReject
NumberInsp.
Stamp

150

QC8- Inspect parts - second check

0.00

150

QC

Memo

0.05

Quality Control

B. 16/09/24

14

0

DAS
08
9-89

160

Identify as per dwg & Stock Location: St

0.00

160

Packaging

Memo

0.02

Packaging

SEP 26 2016

DAS
6
9-89

170

QC21- Final Inspection - Work Order Release

0.00

170

QC

Memo

0.23

Quality Control

16/9/26

DAS
21
9-89

SEP 26 2016

DQA: _____ Date: _____

WORK ORDER NON-CONFORMANCE / UPDATE

QA Closed: _____ Date: _____

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Work Order: _____ Part No. _____ NCR No. _____		DISPOSITION Rework ☐ Scrap ☐ Use-as-is ☐ Suspected Unapproved ☐		AGAINST DEPARTMENT/PROCESS Skid-tube ☐ Machining ☐ Thermoforming ☐ Large Fab ☐ Cross tube ☐ Small Fab ☐ Finishing ☐ Composite ☐ Water Jet ☐ Prod. Eng. Coord. ☐ Rec/Store/Packaging ☐ Supplier ☐ Engineering ☐ Quality ☐ Other ☐					
Date :		Step #:		QTY Effective :			MRB (QSI042) Approval 		
Description Work Order Deviation				Disposition					
							Completed By		
							Lead hand / Supervisor Approval Verification		
							QC / QA Coordinator Approval		

Root Cause				FAULT CATEGORY			
Environment ☐	No Re-verification ☐	Pressure/Forced ☐	Temperature/Cure ☐	Power Loss/Surge ☐	Positioned Wrong ☐		
Design ☐	Operator ☐	Bending ☐	Set-up ☐	Folio/Program ☐	Outside Dimensions ☐		
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Internal Transport ☐	Poor Information ☐	Crushing ☐	Countersink ☐	Off-set ☐	Drawing ☐		
Tribal Knowledge ☐	Rushing ☐	Heat Treat ☐	Cut Too Short ☐	Mislabeled ☐	Finish ☐		
LOA ☐	Product Improvement ☐	Wave/Twist in Tube ☐	Instructions Incomplete/Unclear ☐	Fit/Function ☐	Misread ☐		
Substation ☐	Process Improvement ☐	Marks/Chatter ☐	Drill Holes ☐	Misaligned/off center ☐	Turning Sequence ☐		
Past Expiry Date ☐	Manufacturing Process ☐	OTHER : _____					
Misidentified ☐	Past Due ☐						

Picklist Print

Monday, September 12, 2016 8:54:59 AM

Page 1

Work Order ID: 150970

150970

Parent Item: D2432

D2432

Parent Item Name: Bearpaw 19" X 24"

Start Date: 8/26/2016

Required Date: 9/12/2016

Start Qty: 14.00

Required Qty: 14.00

Comments: IPP REV:A 12.10.17 AS PER DWG REV.H DD VERF:JLM

Component Item ID/ Item Name	Replacement Item ID	Mfg/ Purch	Bin Item	Primary Location	Last Location	Route Seq ID	Unit of Measure	Qty on Hand	Qty per Kit	Total Qty	Qty Issued	Date Issued	Status
MUHMWB10		Purchased	No			120	sf	453.2600	3.7	51.8			

MUHMWB10

UHMW 1" Black - 48"x120" Tivar Mfg.#52480104

09/16/16

Location

Loc Qty

Loc Code

MAT

400

m135497

400

MAT018

53.26

m134823

14.5

m135013

38.76

54

DQA: _____ Date: _____



WORK ORDER NON-CONFORMANCE / UPDATE

QA Closed: _____ Date: _____

Work Order update only ☐

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DART AEROSPACE LTD		Work Order:	150970
Description: Bearpaw		Part Number:	D2432
Inspection Dwg: D2432 Rev: H		Page 1 of 1	

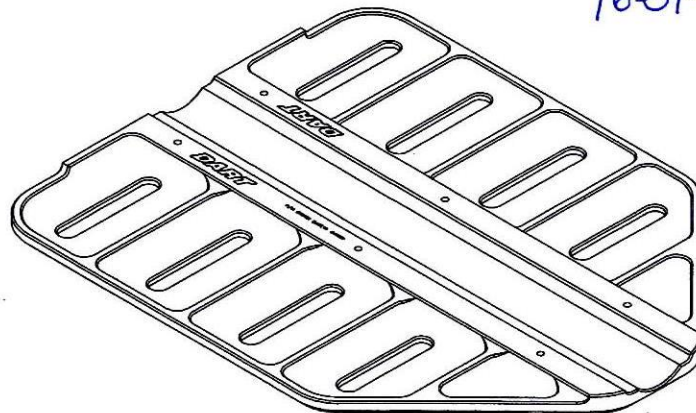
FIRST ARTICLE INSPECTION CHECKLIST

Inspection Sheet Drawing Dimension		Tolerance	Actual Dimension	Accept	Reject	Method of Inspection	Comments
A	0.063 x 45°	+0.030/-0.010	.063 x 45°	✓		vern	
B	0.200	+/-0.030	.179	✓			
C	0.25 x 45°	+/-0.030	.25 x 45°	✓			
D	R0.250	+/-0.030	.250	✓			
E	0.250	+/-0.010	.250	✓			
F	0.625	+/-0.030	.627	✓			
G	0.375	+0.030/-0.010	.386	✓			
H	0.950	+/-0.030	.960	✓			
I	19.000	+/-0.030	19.000	✓			
J	Ø0.260	+0.005/-0.000	.260	✓			
K	Ø0.93	+/-0.030	.93	✓			
L	0.30	+0.030/-0.000	.305	✓			
M	23.750	+/-0.030	23.750	✓			
N	2.000	+/-0.030	2.000	✓			
O	0.38	+/-0.030	.377	✓			
P							
Q							
R							
S							
T							
U							
V							

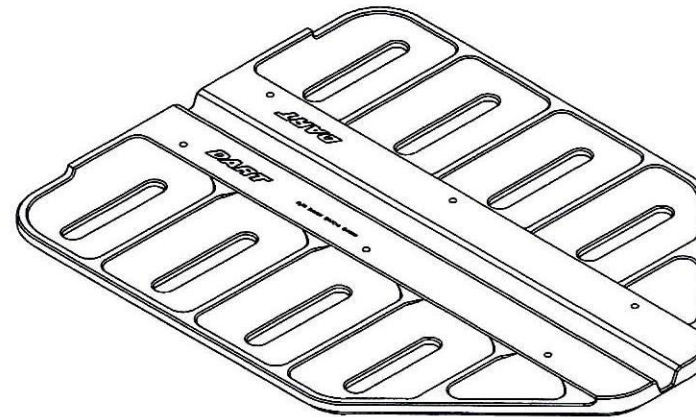
Measured by:	 DAS 44 9-89	Audited by:	 DAS 08 9-89	Preliminary Approval:	
Date:	16-09-21	Date:	16/09/24	Date:	

Rev	Date	Change	Revised by	Approved
A	04.01.09	New Issue P/O D206-559-015	KJ/RF	
B	12.07.31	Dwg Rev updated	KJ	
C	12.10.26	Dwg Rev updated	KJ	
D	13.07.18	Dimension 7.375 removed	KJ	
E	15.02.09	Dimensions revised	KJ	

SHOP COPY
RETURN TO
ENGINEERING
UNCONTROLLED COPY
SUBJECT TO AMENDMENT
WITHOUT NOTICE
WORK ORDER
NO. 150970 MJS
16-09-12



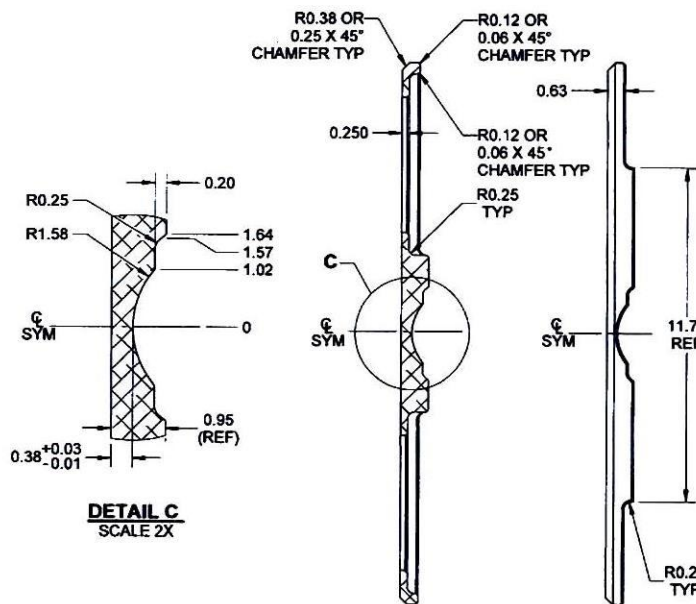
D2432F BEARPAW



D2432-3 BEARPAW

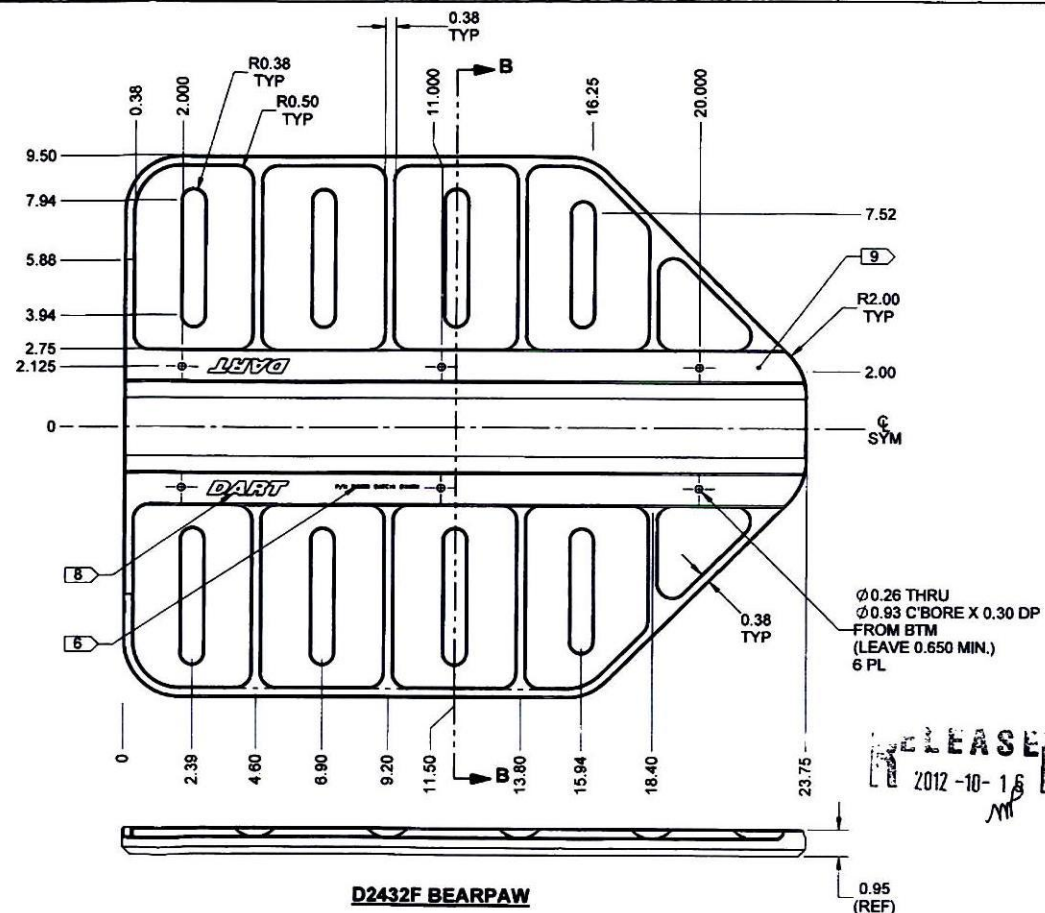
RELEASED
2012-10-16

H	RIB HEIGHTS CHANGED TO CONDITION OF REV. F. SEE REV. F FOR DETAILS.	AP	12.09.24
G	UPDATE DRAWING FORMAT, REMOVED D2432B, ADD D2432-3, ADDED DIMENSION 7.52 (D1-2)	AP	12.05.02
F	CHANGE C'BORE, ADD B AND F PIN	-	98.05.12
E	CHANGE C'BORE DEPTH, BORE RADIUS	-	97.02.27
D	MOVE SLOT	-	96.06.04
C	CHANGE BORE AND C'BORE DEPTH	-	96.03.26
B	RE-DESIGN	-	96.01.24
A	NEW ISSUE	-	95.10.31
REV.	DESCRIPTION	BY	DATE
DESIGN	LE	DART AEROSPACE LTD HAWKESBURY, ONTARIO, CANADA	
DRAWN	AP		
CHECKED	<i>ALS</i>	DRAWING NO.	REV. H
MFG. APPR.	<i>at</i>	D2432	SHEET 1 OF 3
APPROVED	<i>AD</i>	TITLE	SCALE
DE APPR.	<i>AD</i>	BEARPAW	NTS
DATE	12.09.24	COPYRIGHT © 1998 BY DART AEROSPACE LTD THIS DOCUMENT IS PRIVATE AND CONFIDENTIAL AND IS SUPPLIED ON THE EXPRESS CONDITION THAT IT IS NOT TO BE USED FOR ANY PURPOSE OR COPIED OR COMMUNICATED TO ANY OTHER PERSON WITHOUT WRITTEN PERMISSION FROM DART AEROSPACE LTD.	



DETAIL C
SCALE 2X

SECTION B-B



D2432F BEARPAW

NOTES:

- 1) MATERIAL: UHMW BLACK TIVAR 1000 VIRGIN MATERIAL, 1.000 THICK MACHINED TO 0.950 (REF DART SPEC. MUHMWB10)
- 2) FINISH: NONE
- 3) TOLERANCES: PER DART QSI 018 UNLESS OTHERWISE NOTED
- 4) UNITS: INCHES UNLESS OTHERWISE NOTED
- 5) BREAK SHARP EDGES: 0.005 TO 0.010 MAX
- 6) IDENTIFICATION: ENGRAVE PART NUMBER "D2432" AND BATCH NUMBER "BXXXXX" IN ACCORDANCE WITH QSI 044 METHOD 6.3
- 7) WEIGHT: 5.87 lbs
- 8) ENGRAVE DART LOGO TO MAX DEPTH OF 0.012
- 9) APPLY 0.06 x 45° CHAMFER TO ALL EDGES ON SIDE SHOWN UNLESS OTHERWISE INDICATED
- 10) PROFILE PER DRAWING FILE "D2434F-REVH.STP"

DESIGN	LE	DART AEROSPACE LTD	
DRAWN	AP	HAWKESBURY, ONTARIO, CANADA	
CHECKED	AS	DRAWING NO.	REV. H
MFG. APPR.	ST	D2432	SHEET 2 OF 3
APPROVED	AD	TITLE	SCALE
DE APPR.	ST	BEARPAW	NTS
DATE	12.09.24	COPYRIGHT © 1995 BY DART AEROSPACE LTD THIS DRAWING IS PRIVATE AND CONFIDENTIAL, AND IS SUPPLIED ON THE EXPRESS CONDITION THAT IT IS NOT TO BE USED FOR ANY PURPOSE OR COPIED OR COMMUNICATED TO ANY OTHER PERSON WITHOUT WRITTEN PERMISSION FROM DART AEROSPACE LTD.	

